PROJECT NUMBER: 1810
PROJECT TITLE: Project ART
PROJECT LEADER: Ravi Prasad
PERIOD COVERED: April, 1989

I. PROJECT ART

A. **Objective**: To support commercial plant design and Flavor Development objectives at the Bermuda Hundred Pilot Plant.

B. **Results**: Pilot plant runs continued in support of consumer testing. Extractions continue to meet the 97 percent nicotine removal target.

Commercial plant filler was qualified by achieving target extraction level with DL blend filler cut and cased at the Bermuda Hundred Processing Facility. The subjectives were acceptable. Stems cut at Louisville and cased at the commercial plant were successfully used to extract DL blend tobacco within process specifications.

A special test was completed to allow storage study of extracted filler at various temperature, humidity conditions. Three separate stem absorption tests were completed using different stem types/blends, with acceptable absorption efficiencies and pressure drop performance.

Parameters for water column design at steady state conditions were established at the University of Texas and at General Foods Technical Research. The progress is satisfactory and on schedule.

Evaluation of Hinds on-line monitor continued. The data is being generated to allow correlation of nicotine concentration in CO_2 with the filler extraction performance. Data from the pilot plant monitor is being sent to Hinds in order to determine the UV absorption coefficients during the process cycle. These coefficients will then be used to optimize the design for the commercial units. The current plan is for the commercial plant to have dedicated analyzers on the extractor and absorber.

Ultrasonic inspection of the pipe welds has been completed and a majority of weld defects have been repaired. A few minor weld defects will be repaired in May 1989.

C. **Plans**:

1. Assist in the startup of the commercial plant. The pilot plant will be shut down from May 1 to June 15, 1989, to allow the R&D personnel to assist in the commercial plant startup.

2. Repair all remaining weld defects.

3. Carry out scheduled maintenance and safety inspections.

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